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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/073,705	02/11/2002	Dean Hughes	HO-P02368US0	4397

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EXAMINER

RAMANA, ANURADHA

ART UNIT	PAPER NUMBER
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3732

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DATE MAILED: 08/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/073,705

Applicant(s)

HUGHES ET AL.

Examiner

Anuradha Ramana

Art Unit

3732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 11 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 and 19-20 is/are rejected.
- 7) ☒ Claim(s) 18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-17 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Afriat et al. (US 6,203,576) in view of Davidson (US 5,180,394).

Regarding claims 1-17 and 19-20, Afriat et al. disclose a knee joint prosthesis having a femoral component 1 with two condylar portions (5a, 5a), a cam 9 extending between the posterior portions of the condylar portions, a tibial component 2 configured to be implanted into a patient's tibia, and a tibial insert 3, made of an organic polymer such as high-density or "ultra-high molecular weight" polyethylene, having a proximal surface shaped to articulate against femoral component 1 wherein the distal surface of tibial insert 3 fits against the proximal surface of tibial component 2 and a central projecting rib or post 30 on the tibial insert 3 engages intercondylar cage or box 8 of femoral component 1 for posterior stabilization (Figure 1, col. 4, lines 19-67 and col. 5, lines 4-9 and lines 16-19).

Afriat et al. disclose the claimed invention except for a diffusion-hardened surface or coating on a portion of the cam.

Davidson teaches diffusion-bonded or "diffusion-hardened" coating of load bearing and non-load bearing surfaces of implants such as a knee joint prosthesis with blue-black or black zirconium oxide (col. 1, lines 14-35 and lines 61-68; col. 2, lines 1-8; col. 5, lines 11-26 and lines 47-55; col. 6, lines 51-68; and col. 7, lines 1-11 and lines 36-48). Davidson further teaches coatings of variable thickness (col. 8, lines 7-9 and lines 22-40; and col. 10, lines 18-21).

Accordingly it would have been obvious to one of ordinary skill in the art at the time of the invention to have provided a diffusion-hardened coating on load-bearing contact surfaces of the knee joint prosthesis of Afriat et al. to minimize wear and reduce friction or on non-load bearing surfaces to minimize corrosion of the prosthesis as taught by Davidson.

Further, regarding claims 5 and 13, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have constructed the prosthesis of the combination of Afriat et al. as modified by Davidson with a thicker coating on a load bearing surface (greater wear) than a non load bearing surface (lesser wear), since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

### ***Response to Arguments***

Applicant's arguments filed on June 6, 2003 in Paper No. 8 have been fully considered but are not persuasive with respect to claims 1-17 and 19-20.

In response to Applicant's argument that there is no suggestion to combine the references, the Examiner recognizes that references cannot be arbitrarily combined and that there must be some reason why one skilled in the art would be motivated to make the proposed combination of primary and secondary references. *In re Nomiya*, 184 USPQ 607 (CCPA 1975). However, there is no requirement that a motivation to make the modification be expressly articulated. The test for combining references is what the combination of disclosures taken, as a whole would suggest to one of ordinary skill in the art. *In re McLaughlin*, 170 USPQ 209 (CCPA 1971). References are evaluated by what they suggest to one versed in the art, rather than by their specific disclosures. *In re Bozek*, 163 USPQ 545 (CCPA) 1969. In this case, Davidson teaches coating of load bearing surfaces of orthopedic implants such as a knee joint prosthesis for wear reduction (col. 1, lines 7-18, col. 3, lines 34-38, col. 4, lines 60-68 and col. 5, lines 1-14). Further, Davidson teaches coating of non-load bearing surfaces of an orthopedic implant for preventing corrosion of the implant (col. 1, lines 19-24).

### ***Allowable Subject Matter***

Claim 18 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

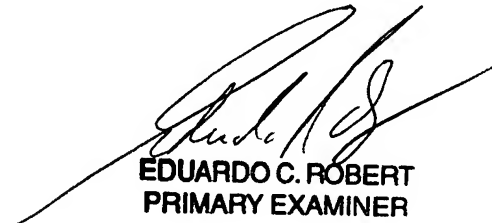
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anu Ramana whose telephone number is (703) 306-4035. The examiner can normally be reached Monday through Friday between 8:30 am and 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Shaver can be reached at (703) 308-2582. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-2708 for regular communications and (703) 308-2708 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0858.

AR *Anuadla Ramana*  
August 22, 2003

  
EDUARDO C. ROBERT  
PRIMARY EXAMINER